

Participant Questionnaire

Participant number: 11

Date: 3 July 2023

Location: Brescia, IT

HRC Study / Algorithms tested: HAMP, STAP-PPE

Study Conducted by: Jared Flowers

Participant link lengths/dimensions: (meters, "spine" is pelvis to shoulder midpoint, "shoulders" is shoulder to shoulder)

Spine	
Neck	
Shoulders	.31

Left Upper Arm	.32
Left Forearm	.24

Right Upper Arm	.31
Right Forearm	.25

Participant joint diameter: (meters)

Left Elbow	.085
Left Wrist	.06

Right Elbow	.085
Right Wrist	.062

Questions:

- A. How safe did you feel? (0 is not safe at all, 5 is neutral, 10 is very safe)
- B. Do you think the robot hindered your motions during the task? (0 is robot completely prevented your motions, 5 is neutral, 10 is robot did not impede you motion)
- C. Did the robot perform logical motions? (0 is robot motions made no sense to you, 5 is neutral, 10 is robot motions made sense to you)
- D. What is your overall satisfaction with the HRC task? (0 is you would not work in this HRC cell again, 5 is neutral, 10 is you enjoyed working in this cell with the robot)

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For Task 1 (engine parts): (circle your answer to each question)

Task 1, Method 1:											2
Question A: (0 is not safe at all, 5 is neutral, 10 is very safe)											
0	1	2	3	4	5	6	7	8	9	10	
Question B: (0 is robot completely prevented your motions, 5 is neutral, 10 is robot did not impede you motion)											
0	1	2	3	4	5	6	7	8	9	10	
Question C: (0 is robot motions made no sense to you, 5 is neutral, 10 is robot motions made sense to you)											
0	1	2	3	4	5	6	7	8	9	10	
Question D: (0 is you would not work in this HRC cell again, 5 is neutral, 10 is you enjoyed working in this cell with the robot)											
0	1	2	3	4	5	6	7	8	9	10	

Task 1, Method 2:											1
Question A: (0 is not safe at all, 5 is neutral, 10 is very safe)											
0	1	2	3	4	5	6	7	8	9	10	
Question B: (0 is robot completely prevented your motions, 5 is neutral, 10 is robot did not impede you motion)											
0	1	2	3	4	5	6	7	8	9	10	
Question C: (0 is robot motions made no sense to you, 5 is neutral, 10 is robot motions made sense to you)											
0	1	2	3	4	5	6	7	8	9	10	
Question D: (0 is you would not work in this HRC cell again, 5 is neutral, 10 is you enjoyed working in this cell with the robot)											
0	1	2	3	4	5	6	7	8	9	10	

Task 1, Method 3:											3
Question A: (0 is not safe at all, 5 is neutral, 10 is very safe)											
0	1	2	3	4	5	6	7	8	9	10	
Question B: (0 is robot completely prevented your motions, 5 is neutral, 10 is robot did not impede you motion)											
0	1	2	3	4	5	6	7	8	9	10	
Question C: (0 is robot motions made no sense to you, 5 is neutral, 10 is robot motions made sense to you)											
0	1	2	3	4	5	6	7	8	9	10	
Question D: (0 is you would not work in this HRC cell again, 5 is neutral, 10 is you enjoyed working in this cell with the robot)											
0	1	2	3	4	5	6	7	8	9	10	

Comments: Experience: 7

Didn't like less predictable motions of
method 2
slower human motions

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For Task 2 (Sharework parts: metal tabs, cylinders, pallets): (circle your answer to each question)

Task 2, Method 1:										2
Question A: (0 is not safe at all, 5 is neutral, 10 is very safe)										
0	1	2	3	4	5	6	7	8	9	10
Question B: (0 is robot completely prevented your motions, 5 is neutral, 10 is robot did not impede you motion)										
0	1	2	3	4	5	6	7	8	9	10
Question C: (0 is robot motions made no sense to you, 5 is neutral, 10 is robot motions made sense to you)										
0	1	2	3	4	5	6	7	8	9	10
Question D: (0 is you would not work in this HRC cell again, 5 is neutral, 10 is you enjoyed working in this cell with the robot)										
0	1	2	3	4	5	6	7	8	9	10

Task 2, Method 2:										1
Question A: (0 is not safe at all, 5 is neutral, 10 is very safe)										
0	1	2	3	4	5	6	7	8	9	10
Question B: (0 is robot completely prevented your motions, 5 is neutral, 10 is robot did not impede you motion)										
0	1	2	3	4	5	6	7	8	9	10
Question C: (0 is robot motions made no sense to you, 5 is neutral, 10 is robot motions made sense to you)										
0	1	2	3	4	5	6	7	8	9	10
Question D: (0 is you would not work in this HRC cell again, 5 is neutral, 10 is you enjoyed working in this cell with the robot)										
0	1	2	3	4	5	6	7	8	9	10

Task 2, Method 3:										3
Question A: (0 is not safe at all, 5 is neutral, 10 is very safe)										
0	1	2	3	4	5	6	7	8	9	10
Question B: (0 is robot completely prevented your motions, 5 is neutral, 10 is robot did not impede you motion)										
0	1	2	3	4	5	6	7	8	9	10
Question C: (0 is robot motions made no sense to you, 5 is neutral, 10 is robot motions made sense to you)										
0	1	2	3	4	5	6	7	8	9	10
Question D: (0 is you would not work in this HRC cell again, 5 is neutral, 10 is you enjoyed working in this cell with the robot)										
0	1	2	3	4	5	6	7	8	9	10

Comments: T2-m4: A 9, B 7, C 8, D 7
T2-m5: A 8, B 7, C 7, D 6